

Workshop 2D

Healthy homes, net zero and the energy cost crisis - the missing link!

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Chaired by: Andrew Burke

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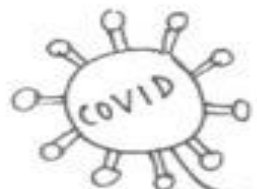
NHMF
Maintenance
Conference
2023





but what about the air at home....





STRATEGY

Healthy lives
↓
Healthy homes
↓
Good indoor air quality

Mitigate climate change
↓
Low-carbon homes
↓
Airtightness

Design
Installation
Operation
Maintenance

VENTILATION

PRACTICE



breathable homes

Data collection

| Stage | Scoping | | Case-studies | |
|----------------------|---|-----------------------|---|---|
| Data subjects | Maintenance practitioners in the UK social housing sector, recruited through the National Housing Maintenance Forum | | Staff in five housing associations in England involved in the case-study schemes | Residents in low rent homes in five recently built, low-energy, housing association schemes in England |
| Methods | On-line survey | Focus group | Interviews, documents, observations, photos | Interviews, documents, observations, photos |
| | 34 survey respondents | 17 FG participants | 16 staff interviewees | 18 resident interviewees |
| Data | Survey responses Q1-4, multi-choice Q5, free text | Focus group recording | Interview recordings Scheme documents Site observation notes Scheme photos | Interview recordings, including home walkthroughs Scheme documents Home observation notes Home photos/videos |

Findings from residents...



Enough extract for everyday cooking?

The whole accommodation gets all the smells. Sometimes, when she's cooking vegetables or making bread the whole house is full of humidity. Open the window, but still we get all the windows wet.

What ventilation system?

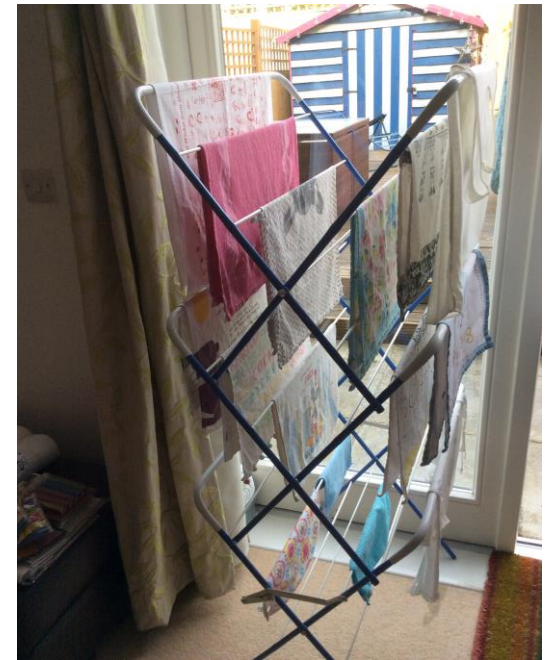
I just got the tenancy agreement, my keys, and then that was it really. No-one even told me it was there or what it was or how to use it.

How much is this costing me?

I mean they tell you to have the ventilation system on 24 hours a day but you're talking, that's running electricity.

What is this?

There's a weird thing at the top of the stairs that blows out cold air.



Where are we supposed to dry the laundry?

Because the downstairs bathroom doesn't have any windows it's quite damp as it is, to dry it in there is not ideal but there's not really anywhere else you can put it.

...more findings from residents

Healthy ventilation?

I mean, in all intents and purposes, we always like a window open anyway. You know, that's ventilation, keeping all the windows, fresh air to be quite honest.

Fresh air or a quiet life?

One day I turned it off, not to be funny just to sort of get a bit of a rest.

Who changes the filters?

They're up in the little door at the top (on a mezzanine platform in the bedroom). We've got an 8-year-old grandson and he'll get up there if we show him what to do.



Low-carbon...but does it work?

You get all these weird designers today, and come up with all these brilliant ideas, they should be shot really, a lot of them.

Repair it!

Turning it off and turning it back on again is a quick-fix solution, you are not addressing the real problem. I said you need to get somebody out who knows what they're doing because these clowns clearly haven't got a clue what they're doing.

Findings from maintenance practitioners...

One-size ventilation

Standardising stock is the key to getting it right, regardless if it's a socket, a switch, MVHR. Then all our operatives know what to expect in a property.

Faulty ventilation inherited by maintenance

Basically, maintaining it should be easy if installed right, and basically the installation has never been right from day one.

Increasingly complex systems

Too much, too complicated, nobody understands it and it's not a good thing that we've done.

Do we really need MVHR?

Well there's natural ventilation, there's nothing wrong to naturally ventilate the units.

Sustainability drives development

I'll be honest, the main push was deliver something to that code standard, not really that bothered how you get there...a bit of a points exercise instead of thinking about the people who're actually going to live in them. Maintenance cost didn't really come into it.



...more findings from maintenance practitioners

Lifestyle responsible for inadequate ventilation

Well, lifestyle isn't it...but trying to convince them of that, they don't see it's a lifestyle thing. They want to know what we are going to do about it not what they can do about it.



Invest in high quality MVHR

It definitely pays back that residents would accept them better. You haven't got a noise issue. And you overall achieve a better ventilation strategy with this, that's the main thing.

Trusting ventilation technology?

It goes back to people who are living on low incomes need a lot of convincing that the technology operates in their interest.



Zero-carbon is the future!

We've got to start giving it some thought, even if we don't do anything about it. Be ready for it, it's coming, it's not going to go away.

IAQ the next big thing for maintenance!

When you're talking about the impacts of air on people's health and lifespan and ability to concentrate, you start to think, my goodness, how have we not thought about this before.

Ventilation systems...and health?

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They're just like, **a bit of a bugbear** to be honest, for want of a better word. I mean there's a lot more riskier stuff we need to concentrate on, like gas servicing or fire risk assessments and stuff like that. It's taking our mind off that.

“

When that sub-contractor went out and said there was a potential Legionella risk, it was sort of like a bit of a knee-jerk reaction: **'We need to get these sorted straightaway'**.

“

Some things are driven on cost aren't they, but then we had someone, there was a big claim and she suffered. It's only then you realise what the system can do. She was asthmatic and everything, then the expensive filters most probably would have helped and you just think, **we've missed something there.**



Energy cost crisis

Energy price cap up 12% Oct 2021

+ 54% Apr 2022

+ 27% Oct 2022

+ 20% Apr 2023

Leading to...

Reduced or no heating

Switching off ventilation systems

Keeping windows closed continuously

Disconnections 'by the backdoor'

A double penalty...

Underheating

Underventilating

Result...

Condensation, damp and mould

Unhealthy indoor air

Cold, damp, unhealthy homes

...and damage to the building fabric

Damp, mould and health

- > Housing Health and Safety Rating System, HHSRS, in force since April 2006
- > Decent Homes Standard, updated June 2006
- > Homes (Fitness for Human Habitation) Act 2018
- > Housing Ombudsman Service report, *Spotlight on damp and mould: It's not lifestyle'*, Oct 2021

Rochdale Coroner's Reg 28 Report, Nov 2022,
following the death of Awaab Ishak in Dec 2020

'How does this happen, in the UK, in 2020?'

'A defining moment for the UK housing sector.'

- > Regulator of Social Housing letter to large housing associations, 22 Nov 2022
- > Housing Ombudsman letter to all member landlords, 29 Nov 2022

Three calls for action by housing providers

- 1 Embed good indoor air quality as a health responsibility of housing organisations to their residents, and reflect this objective in maintenance practice on ventilation
- 2 Ensure low/zero-carbon homes continue to cut heat loss and carbon emissions, as well as having healthy air, by making maintenance of ventilation systems a high priority
- 3 Build connections between development and occupation phases in the life of dwellings, to tackle practices hindering ventilation maintenance

Eight lessons for housing providers to consider

- 1 Involve **maintenance expertise** at design and specification stages
- 2 Reflect typical household practices in **ventilation design** assumptions (provision for drying laundry is critical!)
- 3 Highlight ventilation in **resident induction**, in future as well as first lettings, including mutual exchanges
- 4 Set up ventilation system **servicing** at the start of maintenance responsibility
- 5 Categorise ventilation faults as **urgent repairs**
- 6 Look for **causes** of ventilation problems beyond resident lifestyle
- 7 Learn from **maintenance experience** of low-energy homes in occupation
- 8 Make ventilation maintenance an **essential skill** for maintenance careers



Healthy homes, net zero and the energy cost crisis...
*maintaining effective ventilation
is the essential link*

Thank you for listening...
time to share your practice and experience in
maintaining effective ventilation in your homes?

Dr Jenny Brierley

www.breathablehomes.com

breathable
homes
fresh air and low-carbon

Thank you.

See you at the **next**
conference!